Remarks/Arguments

Applicant has carefully reviewed the Non-Final Office Action mailed May 5, 2011. Applicant maintains that pending claims 1-23 patentably distinguish over the art of record for the reasons given below.

Rejection of Claim 1 under 35 U.S.C. § 102(b)

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,621,467 to Chien et al. (hereinafter "Chien"). Applicants respectfully traverse this rejection.

With respect to amended claim 1, Chien, fails to teach or suggest the following element:

> *for each identified macroblock, deriving at least one intra-prediction coding mode for obtaining coding prediction values to define a concealment direction, the at least one intra-prediction coding mode derived in accordance with the coded image;*

In rejecting applicant's claim 1, the examiner maintains that Chien et al. derive an intra-coding mode. To that end, the examiner relies on Col. 4, lines 35-51, Col. 1, lines 30-32 and Col. 1, lines 50-55. Applicants will discuss each of these cited sections of Chien et al. and why that section simply does not teach this feature of applicant's claim 1.

Col. 4, lines 35-51 of Chien et al. describes three different concealment modes. The first concealment mode undergoes execution when a high correlation exists between the current and prior frame, when the prior frame is a simple replacement of a lost block with a temporally predicted block. The second concealment mode undergoes execution when a low correlation exists between the current and prior frame, the second concealment mode performing spatial error concealment. The third concealment mode combines the first two modes.

The concealment modes referred to at Col. 4, lines 34-51 of Chien et al. do not constitute "coding modes" as defined in applicant's specification and as well understood in the art. Clearly, the concealment modes of Chien et al. do not constitute the any of the

exemplary coding modes described at applicant's specification at page 4, lines 13-24 for compressing data in accordance with any type of compression standard.

Col. 1, lines 30-32 of Chien et al. describe directional interpolation. However, this cited portion says nothing about any coding mode that would establish which direction interpolation should occur, let alone the desired direction of concealment.

Lastly, Col. 1, lines 50-51 of Chien et al. make reference to US Patent 4,807,033 to Keeson et al. and particularly to directional interpolation based on the detection of more than one strong gradient. Like the other cited sections of Chien et al., this cited section says nothing regarding a coding mode, that is a mode associated with coding (i.e., compressing) a macroblock of an image.

In summary, none of the sections of Chien et al. relied upon by the examiner, or any other part of that patent teaches applicant's feature of *deriving at least one intra-prediction coding mode for obtaining coding prediction values to define a concealment direction*. Therefore, Chien et al. fails to disclose all of the features of applicant's claim 1, warranting reversal of the 35 U.S.C. § 102(b) rejection of that claim.

Rejection of Claims 2-23 under 35 U.S.C. § 103(a)

Claims 2-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chien in view of "H.264/MPEG-4 Part 10: Intra-Prediction" by Richardson (hereinafter "Richardson"). Applicants respectfully traverse this rejection.

As explained above, Chien concerns a technique for concealing errors in a reproduced image, but fails to teach or suggest anything with respect to concealing errors in an image using a "coding mode". Richardson fails in this respect as well. Richardson merely describes the H.264 coding technique and explains its use to code images. However, nothing in Richardson discloses or suggests that the H.264 coding technique, or any other coding techniques for that matter, can serve to conceal image errors. Hence, Richardson fails to teach that a "coding mode for obtaining coding prediction values" for defining a concealment direction or that an interpolation filter is established for the

coding mode as recited in claims 1 and 14. Accordingly, claims 1 and 14 patentably distinguish over the combination of Chien and Richardson for at least these reasons.

Moreover, "[i]f an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious" (MPEP §2143.03, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)). All remaining claims ultimately depend from either claim 1 or claim 14. Accordingly, all of the remaining claims patentably distinguish over the cited references for at least the reasons set forth above. Thus, applicants request reconsideration of this rejection.

In addition to the reasons discussed above, several of the dependent claims recite features which are also patentable and non-obvious over the cited references.

For example, with respect to claims 4 and 16, the cited references at least fail to teach or suggest *"wherein the step of establishing the interpolation filter further comprises the step of deriving a interpolation filter mirroring the interpolation filter prescribed by the H.264 coding technique for the derived Intra_4x4 prediction mode"* as recited in these claims.

With respect to the elements set forth in claims 4 and 16, applicant's specification states the following at page 5, line 27 through page 6, line 3:

> In some instances, one or more of the pixels A-D in row 210 may have missing values, and thus provide a poor estimate for the pixels a-p in the sub-macroblock 200. In accordance with another aspect of the present principles, a "mirrored" interpolation filter for Mode 1 serves to prescribe the manner in which to obtain such pixel concealment values. In contrast to the Mode 1 H.264 coding technique interpolation filter which makes use of the top neighboring row 210 to provide concealment values as seen in FIG. 3A, the mirrored interpolation filter of the present principles makes use of a bottom neighboring row 220 of pixels A', B', C' and D' for error concealment purposes as seen in FIG. 4A. Thus, instead of using value of pixel A in row 210 to estimate each of the pixels a, e, i and m, the mirrored interpolation filter employs the pixel A' in row 220.

In general, the cited passage explains that a "mirrored" interpolation filter may select an alternate set of reference pixels for concealment purposes if the reference pixels typically chosen for concealment purposes includes missing or corrupt values. The

Examiner acknowledges that Chien fails to disclose the elements relating to the H.264 coding techniques (see page 4 of the non-final Office Action dated March 9, 2010). Likewise, Richardson fails to disclose or suggest the same. Although this reference discloses certain applications of the H.264 coding scheme, this reference fails to teach or suggest anything which is even remotely related to the mirroring technique described in claims 4 and 16. Therefore, since neither of the references teaches nor suggests the elements set forth in claims 4 and 16, these claims are believed to be patentable and non-obvious over the cited references.

Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

No fees are believed due with regard to this Amendment. Please charge any fee or credit any overpayment to Deposit Account No. **07-0832.**

<div align="right">
Respectfully submitted,
Cristina Gomila
</div>

By: _____

/Robert B. Levy/
Attorney for Applicants
Reg. No. 28,234
Phone (609) 734-6820

Patent Operations
Thomson Licensing LLC
P.O. Box 5312
Princeton, New Jersey 08543-5312
May 31, 2011